

## WHAT IS CLAIMED IS:

1. A method of treating dental carries and remineralizing lesions, said method comprising the steps  
5 of:

directing a stream comprising an oxidizing gas onto a carious lesions for a period of time sufficient to kill microorganisms within the carious lesion; and

thereafter applying to the lesion a  
10 remineralization formulation.

2. The method according to claim 1 wherein the formulation comprises a zinc salt.

15 3. The method according to claim 2 wherein the formulation comprises zinc chloride.

4. The method according to claim 3 wherein the formulation comprises:

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	<u>INGREDIENT</u>	<u>PERCENT W/W</u>
	Water	16.5576
	Sorbitol 70%NF	21.5933
	Sodium Benzoate NF	0.5000
25	PVP	2.0000
	Sodium Tripolyphosphate	3.0000
	Titanium Dioxide	1.0000
	Sodium Monofluorophosphate	0.2400
	Xylitol	0.4000
30	Zinc Chloride	0.7500
	Sodium Citrate USP	2.6000
	Methyl Paraben	0.1200
	Dicalcium Phosphate, Dihydrate USP	12.0000

	Glycerin, 99.7%	17.8890
	CMC-7MXF	0.9000
	Hydrated Silca (Sylodent 756)	9.7109
	Hydrated Silica (Zeodant 165)	4.4141
5	Sodium Lauryl Sulfate	0.6000
	Sodium Methyl Cocoyl Taurate	0.6000
	Riboflavin	0.0001
	Flavor (Noville AN114153)	2.0000
	Chlorine Dioxide Solution, 2%	3.1250
10	Sodium Hydroxide USP, 10% (pH adjust)	0.0000
		100.0000

5. The method according to claim 3 wherein the  
15 formulation comprising:

<u>Ingredient</u>	<u>Percent w/w</u>
Deionized Water	93.4800
Sodium Benzoate	0.3000
Sodium Fluoride	0.2400
Xylitol	1.0000
Zinc Chloride	0.5000
Sodium Citrate	1.5000
Methylparaben	0.0800
Tauranol WS HP	0.7500
Flavor	0.8000
Poloxamor 407	1.2500
FD&C Blue #1	0.0000
Citric Acid	0.1000
	100.0000

6. A formulation for the remineralization of teeth  
20 following ozone treatment, said formulation comprising a  
zinc salt.

7. The formulation according to claim 6 wherein the formulation comprises zinc chloride.

- 5 8. A formulation for the remineralization of teeth following ozone treat, said formulation comprising:

<u>Ingredient</u>	<u>Percent W/W</u>
Water	16.5576
Sorbitol, 70%NF	21.5933
Sodium Benzoate NF	0.5000
PVP	2.0000
Sodium tripolyphosphate	3.0000
Titanium dioxide	1.0000
Sodium Monofluorophosphate	0.2400
Xylitol	0.4000
Zinc Chloride	0.7500
Sodium Citrate USP	2.6000
Methyl paraben	0.1200
Dicalcium Phosphate, Dihydrate USP	12.0000
Glycerin 99.7%	17.8890
CMC 7MXF	0.9000
Hydrated Silica (Sylodent 756)	9.7109
Hydrated Silica (Zeodent 165)	4.4141
Sodium Lauryl Sulfate	0.6000
Sodium Methyl Cocoyl Taurate	0.6000
Riboflavin	0.0001
Flavor (Noville AN114153)	2.0000
Chlorine Dioxide Solution, 2%	3.1250
Sodium Hydroxide USP, 1-% (pH adjust)	0.0000
	100.0000

- 10 9. A formulation for the remineralization of teeth following ozone treatment, said formulation comprising:

<u>Ingredient</u>	<u>Percent w/w</u>
Deionized Water	93.4800
Sodium Benzoate	0.3000
Sodium Fluoride	0.2400
Xylitol	1.0000
Zinc Chloride	0.5000
Sodium Citrate	1.5000
Methylparaben	0.0800
Tauranol WS HP	0.7500
Flavor	0.8000
Poloxamor 407	1.2500
FD&C Blue #1	0.0000
Citric Acid	0.1000
	100.0000